

January 13, 2006

The Honorable George V. Voinovich, Chairman  
Subcommittee on Clean Air, Climate Change,  
and Nuclear Safety  
Committee on Environment and Public Works  
United States Senate  
Washington, D.C. 20510

Dear Mr. Chairman:

The Fiscal Year (FY) 2005 Energy and Water Development Appropriations Act, House Reports 108-554 and 108-792, directed the U.S. Nuclear Regulatory Commission (NRC) to continue to provide a monthly report on the status of its licensing and other regulatory activities. The initial reporting requirement arose in the FY 1999 Energy and Water Development Appropriations Act, Senate Report 105-206. The FY 2006 Energy and Water Development Appropriations Act, Conference Committee Report 109-275, directed the NRC to provide the status report on a quarterly basis. The NRC plans to implement the change in reporting frequency after the next report, which would cover December 2005.

On behalf of the Commission, I am pleased to transmit the eighty-fourth report, which covers the month of November 2005. I am also providing additional information in this cover letter in order to keep you fully and currently informed of NRC's licensing and regulatory activities.

I would like to update you on the efforts by Southern Nuclear Operating Company, the licensee for the Hatch nuclear power plant near Baxley, Georgia, to reconcile its inventory of spent fuel pin segments within the plant's spent fuel pools. The licensee previously reported a total length of unaccounted fuel to be approximately 88 inches. The licensee has since located a 56 inch long fuel pin through additional fuel assembly inspection activities. The NRC has conducted an inspection to examine records and observed spent fuel pool activities to characterize the special nuclear material in the pool. Because of extensive radiological and security measures in place, it is highly unlikely that the missing material is in an uncontrolled location or that it poses any risk to the public.

On January 5, 2006, the NRC provided to Entergy Nuclear Operations, Inc. (Entergy) a draft confirmatory order that would require Entergy to install back-up power to the emergency notification system at its Indian Point nuclear power facility, 25 miles north of New York City. The NRC's proposed action would implement the direction by Congress in the Energy Policy Act of 2005. The confirmatory order process is being used in this instance to expedite implementation of the mandatory statutory provisions. The draft confirmatory order was provided to Entergy to ensure joint understanding of the implementation requirements in the order's specific provisions. Once issued, the confirmatory order will require the Indian Point plant to install back-up power for its entire alert and notification system, ranging from activation command to the actual alert devices, including sirens, receivers, transmitters, and sensors.

The NRC will require the back-up system to be operational in standby mode for a minimum of 24 hours and 15 minutes in alert mode following a loss of power. Other specifics in the order designate testing requirements and other standards. The order is expected to be issued by January 31, 2006.

On January 4, 2006, the NRC staff issued Orders to four individuals prohibiting their involvement in NRC-regulated activities because of their roles in providing incomplete and inaccurate information to the agency on conditions at the Davis-Besse Nuclear Power Plant in 2001. The incomplete and inaccurate information concerned the licensee's written and oral responses to NRC Bulletin 2001-001, "Circumferential Cracking of Reactor Pressure Vessel Head Penetration Nozzles." The Davis-Besse plant, located at Oak Harbor, Ohio, is operated by FirstEnergy Nuclear Operating Company. Orders prohibiting involvement in NRC-regulated activities for a period of five years were issued to David Geisen, who was Manager of Design Engineering; Dale Miller, who was Regulatory Affairs Compliance Supervisor; and Steven Moffitt, who was Technical Services Director. An Order prohibiting involvement in NRC-regulated activities for a period of one year was issued to Prasoon Goyal, who was a Senior Design Engineer at Davis-Besse. The Orders are effective immediately, and the individuals have 20 days in which to request a hearing. Previously, the NRC levied a \$5.45 million civil penalty against FirstEnergy for violations associated with the reactor vessel head degradation and for providing incomplete and false information to the agency. FirstEnergy has paid this civil penalty. Also, the NRC previously issued an Order to Andrew Siemaszko, who was a system engineer at Davis-Besse, which, if sustained, would prohibit his involvement in NRC-regulated activities for a five-year period. A hearing on the Order to Mr. Siemaszko is ongoing. In addition to these enforcement actions, the NRC has previously referred issues related to the Davis-Besse reactor vessel head degradation to the Department of Justice.

On December 30, 2005, the Commission voted to approve a final design certification rule for the AP1000 advanced reactor design submitted by Westinghouse Electric Company in March 2002. The certification, which will be contained in NRC regulations as Appendix D to 10 CFR Part 52, will be the fourth issued under the agency's new reactor licensing process for standard design certification and will be valid for 15 years. The information collection requirements contained in the rule are subject to approval by the Office of Management and Budget.

On November 30, 2005, the NRC began monitoring Exelon Generating Company's efforts related to the identification of elevated tritium levels measured in groundwater on the Braidwood site located in Braceville, Illinois, and the potential for migration of the tritium off site. The licensee has expanded its characterization efforts through the installation of additional monitoring wells and sampling of nearby residential drinking water wells. Measurable levels of tritium have been identified in off-site groundwater monitoring wells and in one residential well. To date, the levels in the residential well are below the Environmental Protection Agency drinking water standard for tritium. The Illinois Environmental Protection Agency (IEPA) has notified Exelon and Braidwood that tritium concentrations in two off-site groundwater monitoring wells, as well as a nearby pond and five on-site test wells are in violation of the IEPA Act. Braidwood is required to provide the IEPA with their plans to resolve the violations by early February. The NRC has been conducting independent radiological analysis of selected environmental monitoring samples to confirm the licensee's assessments. The NRC continues to monitor the licensee's progress in characterizing the migration of the tritium, confirming the source of the tritium, and evaluating the utility's recovery actions.

On November 17, 2005, NRC staff issued a 10 CFR Part 72 site-specific license to the Pacific Gas and Electric Company (PG&E), to construct and operate an Independent Spent Fuel Storage Installation (ISFSI) at the Humboldt Bay power plant site. The ISFSI will allow PG&E to transfer all the remaining spent fuel from the Humboldt Bay Unit 3 spent fuel pool into interim storage in dry casks so that the decommissioning and dismantlement of Humboldt Bay, Unit 3, which was permanently shut down in 1976, can be completed.

The NRC and State regulators have issued legally binding requirements to licensees to implement increased controls over radioactive materials in certain quantities of concern. The requirements are part of a cooperative effort, announced in September 2005, between the NRC and the 33 Agreement States to enhance controls of radioactive materials that could potentially be of use to terrorists. The effort is consistent with the International Atomic Energy Agency's Code of Conduct for the Safety and Security of Radioactive Materials, which is the internationally recognized standard for categorizing and protecting radioactive materials. As of December 2, 2005, the Agreement States and the NRC have issued the increased controls to their licensees. Approximately 2,200 licensees nationwide have received the requirements. Licensees must complete implementation of the required measures within 180 days of receiving them or the first day they possess quantities of concern, whichever is later.

I also want to inform you of the agency's progress in implementing the Energy Policy Act of 2005. Some of the agency's recent actions include:

- Section 651(c)(1). Provision of Support to University Nuclear Safety, Security, and Environmental Protection Programs. The staff has developed a plan to implement the program to provide grants, loans, cooperative agreements, contracts, and equipment to institutions of higher education to support courses, studies, training, curricula, and disciplines pertaining to nuclear safety, security, or environmental protection, or other fields that the Commission determines to be critical to the NRC's regulatory mission.
- Section 651(c)(3). Payment of transportation, lodging and subsistence expenses for student employees and health and medical services for dependents of NRC employees serving abroad. The staff has developed a plan to implement this program to provide a stipend to student employees who meet the requirements of this section.
- Section 651(d). Radiation Source Protection. On November 30, 2005, the initial meeting of an inter-agency task force (Task Force) on radiation source protection and security was held at NRC headquarters. The Task Force was established to evaluate and provide recommendations relating to the security of radiation sources in the United States from potential criminal or terrorist threats, including acts of sabotage, theft, or use of a radiation source in a radiological dispersal device. I am the Chairman of the Task Force, which is comprised of representatives of more than one dozen Federal agencies. The Task Force members discussed their Task Force charter, schedule, and the outline for their final report, which is due to Congress and the President no later than August 8, 2006. All meeting objectives were accomplished.

Please do not hesitate to contact me if I may provide additional information.

Commissioner Jaczko did not participate in the development of this letter to the extent it deals with the Yucca Mountain project.

Sincerely,

**/RA/**

Nils J. Diaz

Enclosure:  
Monthly Status Report on the Licensing Activities  
and Regulatory Duties of the U.S. NRC, November 2005

cc: Senator Thomas R. Carper

Identical letter sent to:

The Honorable George V. Voinovich  
Chairman, Subcommittee on Clean Air,  
Climate Change, and Nuclear Safety  
Committee on Environment and Public Works  
United States Senate  
Washington, D.C. 20510  
cc: Senator Thomas R. Carper

The Honorable Ralph M. Hall  
Chairman, Subcommittee on Energy and Air Quality  
Committee on Energy and Commerce  
United States House of Representatives  
Washington, D.C. 20515  
cc: Representative Rick Boucher

The Honorable Pete V. Domenici  
Chairman, Subcommittee on Energy  
and Water Development  
Committee on Appropriations  
United States Senate  
Washington, D.C. 20510  
cc: Senator Harry Reid

The Honorable David L. Hobson  
Chairman, Subcommittee on Energy  
and Water Development  
Committee on Appropriations  
United States House of Representatives  
Washington, D.C. 20515  
cc: Representative Peter Visclosky

The Honorable James M. Inhofe  
Chairman, Committee on Environment  
and Public Works  
United States Senate  
Washington, D.C. 20510  
cc: Senator James Jeffords

The Honorable Joe Barton  
Chairman, Committee on Energy and Commerce  
United States House of Representatives  
Washington, D.C. 20515  
cc: Representative John D. Dingell

MONTHLY STATUS REPORT ON THE  
LICENSING ACTIVITIES AND REGULATORY DUTIES OF THE  
UNITED STATES NUCLEAR REGULATORY COMMISSION

**NOVEMBER 2005**

Enclosure

## TABLE OF CONTENTS<sup>1</sup>

I	Implementing Risk-Informed Regulations . . . . .	2
II	Revised Reactor Oversight Process . . . . .	3
III	Status of Issues in the Reactor Generic Issue Program . . . . .	3
IV	Licensing Actions and Other Licensing Tasks . . . . .	3
V	Status of License Renewal Activities . . . . .	9
VI	Status of Review of Private Fuel Storage, Limited Liability Corporation's Application for a License to Operate an Independent Spent Fuel Storage Installation on the Reservation of the Skull Valley Band of Goshute Indians . . . . .	10
VII	Enforcement Process and Summary of Reactor Enforcement by Region . . . . .	11
VIII	Power Reactor Security Regulations . . . . .	12
IX	Power Uprates . . . . .	14
X	New Reactor Licensing . . . . .	15

---

<sup>1</sup>Note: The period of performance covered by this report includes activities occurring between the first and last day of November 2005. The transmittal letter to Congress accompanying this report may provide more recent information in order to keep Congress fully and currently informed of NRC's licensing and regulatory activities.

## **I Implementing Risk-Informed Regulations**

The U.S. Nuclear Regulatory Commission (NRC) has made significant progress toward risk-informing its regulations for nuclear power reactors. In July 1998, the NRC issued Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis." This guidance allowed licensees to support requests to change the design and licensing basis of reactor facilities using risk information. In late summer 1998, NRC issued three more regulatory guides allowing licensees to request NRC approval of risk-informed alternatives to existing requirements on in-service inspection, in-service testing, and technical specifications. Since that time, several rulemakings have been completed to risk-inform NRC regulations. These rulemakings included revisions to the maintenance rule for nuclear power plants (10 CFR 50.65) in November 2000, combustible gas control requirements for reactor containment buildings (10 CFR 50.44) in September 2003, and nuclear reactor fire protection regulations (10 CFR 50.48) in June 2004.

On November 22, 2004, the NRC published a final rule, 10 CFR 50.69, "Risk-Informed Categorization and Treatment of Structures, Systems, and Components for Nuclear Power Reactors." This risk-informed regulation establishes an alternate set of requirements incorporating up-to-date analytic tools and risk insights to enhance plant safety by enabling nuclear power plant licensees to determine more precisely the safety significance of reactor structures, systems, and components and maintain these structures, systems, and components in a manner commensurate with their safety significance. To ensure that the new regulation is properly implemented, the NRC developed Regulatory Guide 1.201, "Guidelines for Categorizing Structures, Systems and Components in Nuclear Power Plants According to Their Safety Significance" for trial use. The NRC is now working to prepare the Regulatory Guide in final form.

Risk-informed requirements for emergency core cooling systems are also being developed. The NRC published a proposed rule for risk-informing these requirements on November 7, 2005, with a 90-day public comment period. Final rules are usually issued about nine months after a proposed rule.

Broad efforts to transform the overall deterministic structure of NRC regulations into a new format based on the use of risk information are also in progress. Since 2003, the NRC has been working on a regulatory structure for new plant licensing which would result in risk-informed, technology-neutral regulations for licensing of future nuclear power reactor designs. In December 2005, the NRC staff is scheduled to provide the Commission a plan for the development and implementation of a revised 10 CFR Part 50. The plan will include the issuance of an Advance Notice of Proposed Rulemaking (ANPR) for this revised Part 50. It is anticipated that this ANPR will be issued in 2006. The staff expects the first part of the program to be ready for stakeholder review in mid-2006. NRC is also investigating whether this risk-informed, technology-neutral regulatory structure should apply or be available to risk-inform the current regulations on light water reactors in 10 CFR Part 50.

## **II Revised Reactor Oversight Process**

The NRC continues to implement the Reactor Oversight Process (ROP) at all nuclear power plants. The NRC continues to meet with interested stakeholders on a periodic basis to collect feedback on the efficacy of the process and to consider the feedback for future ROP refinements. Recent activities include the following:

- On November 16, 2005, the NRC staff hosted a monthly public meeting on the Mitigating Systems Performance Index (MSPI) at NRC headquarters. Meeting attendees discussed the status of the NRC staff's review of the MSPI outlier and basis documents, remaining milestones, and MSPI implementation.
- On November 17, 2005, the NRC staff hosted the monthly ROP public meeting at NRC headquarters. The meeting attendees discussed ROP cross cutting issues, Significance Determination Process timeliness improvements, Performance Indicator (PI) general improvements, and frequently asked questions (FAQs) on the PIs. During discussion of the FAQs, the staff conveyed the results from a November 1, 2005 public meeting on a FAQ appeal regarding a Millstone safety system unavailability PI on the high pressure safety injection system.

## **III Status of Issues in the Reactor Generic Issue Program**

On November 17, 2005, Generic Safety Issue 80 (GSI-80), "Pipe Break Effects on Control Rod Drive Hydraulic Lines in the Drywells of BWR Mark 1 and II Containments," was closed. GSI-80 addressed the likelihood and effects of a loss-of-coolant accident which could cause interactions with control rod drive (CRD) hydraulic lines in such a way as to prevent rod insertion, creating the potential for recriticality when the core is reflooded. The staff conducted a technical assessment in which an analysis of significant high energy piping breaks in the areas of the CRD piping used for insertion and withdrawal of control rods was completed. Results indicated that the impacting pipe would have insufficient energy to crimp the CRD piping. The testing also showed that, as the postulated energy of the impacting piping increases, the CRD piping would break open before being crimped closed, which would allow control rod insertion and thus prevent recriticality. Consequently, the staff determined that the issue would not be pursued further, and GSI-80 was closed with no changes to existing regulations or guidance.

All other GSIs continue to be on track in accordance with the schedules previously submitted.

## **IV Licensing Actions and Other Licensing Tasks**

Operating power reactor licensing actions are defined as orders, license amendments, exemptions from regulations, relief from inspection or surveillance requirements, topical reports submitted on a plant-specific basis, notices of enforcement discretion, or other actions requiring NRC review and approval before they can be implemented by licensees. The fiscal year (FY) 2006 NRC Performance Plan incorporates two output measures related to licensing actions -- number of licensing actions completed per year and age of the licensing action inventory.

Other licensing tasks for operating power reactors are defined as licensee responses to NRC requests for information through generic letters or bulletins, NRC responses to 10 CFR 2.206

petitions, NRC review of generic topical reports, responses by the Office of Nuclear Reactor Regulation to regional requests for assistance, NRC review of licensee 10 CFR 50.59 analyses and final safety analysis report updates, or other licensee requests not requiring NRC review and approval before they can be implemented by licensees. The FY 2006 NRC Performance Plan incorporates one output measure related to other licensing tasks -- the number of other licensing tasks completed.

The NRC did not meet its timeliness goals at the end of FY 2005 for completing 100 percent of its reactor licensing actions within two years because the scheduled review of the Vermont Yankee extended power uprate was extended to allow a thorough review of key technical issues associated with safe operation at higher power levels. The NRC met the other output measure goals.

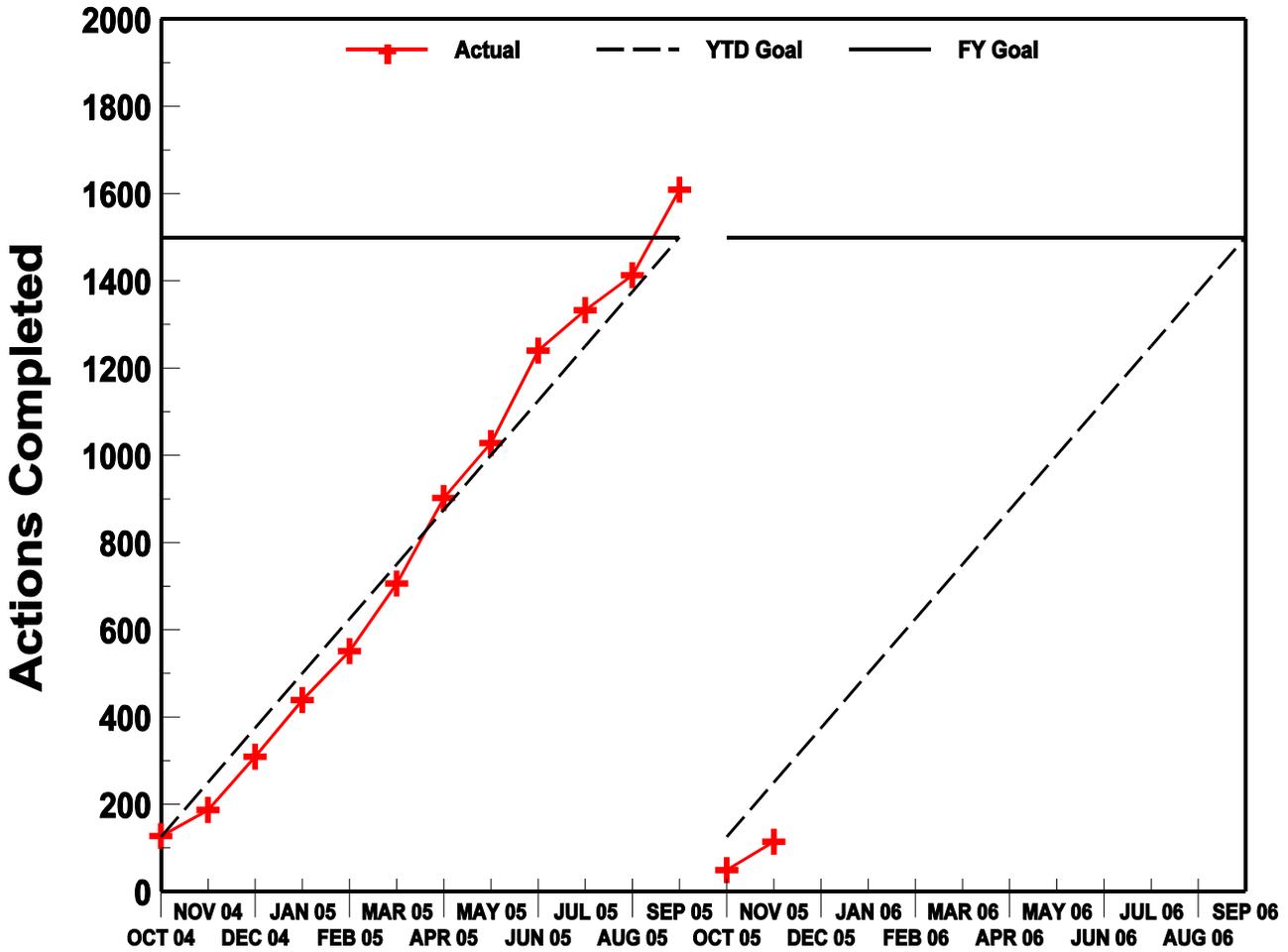
The actual FY 2004 and FY 2005 results, the FY 2006 goals, and the actual FY 2006 results for the three NRC Performance Plan output measures for operating power reactor licensing actions and other licensing tasks are shown in the table below.

PERFORMANCE PLAN				
Output Measure	FY 2004 Actual	FY 2005 Actual	FY 2006 Goals	FY 2006 Actual (thru 11/30/2005)
Licensing actions completed/year	1741	1609	≥ 1500	114
Age of licensing action inventory	91% ≤ 1 year; and 100% ≤ 2 years	92.6% ≤ 1 year; and 99.9% ≤ 2 years	96% ≤ 1 year; and 100% ≤ 2 years old	88.5% ≤ 1 year; and 99.4% ≤ 2 years
Other licensing tasks completed/year	671	715	≥ 500	151

The charts on the following pages show NRC's FY 2006 trends for the three operating power reactor licensing action and other licensing task output measure goals:

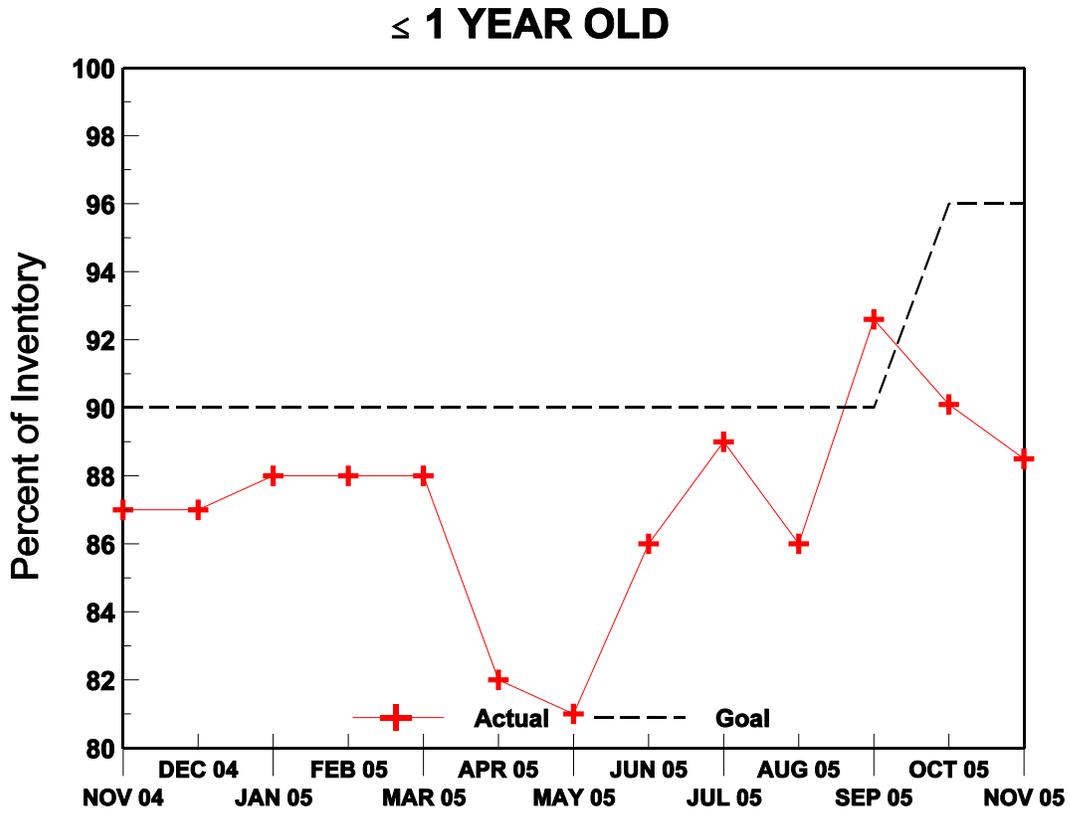
# Nuclear Reactor Safety - Reactor Licensing

Performance Plan Target: Completed Licensing Actions



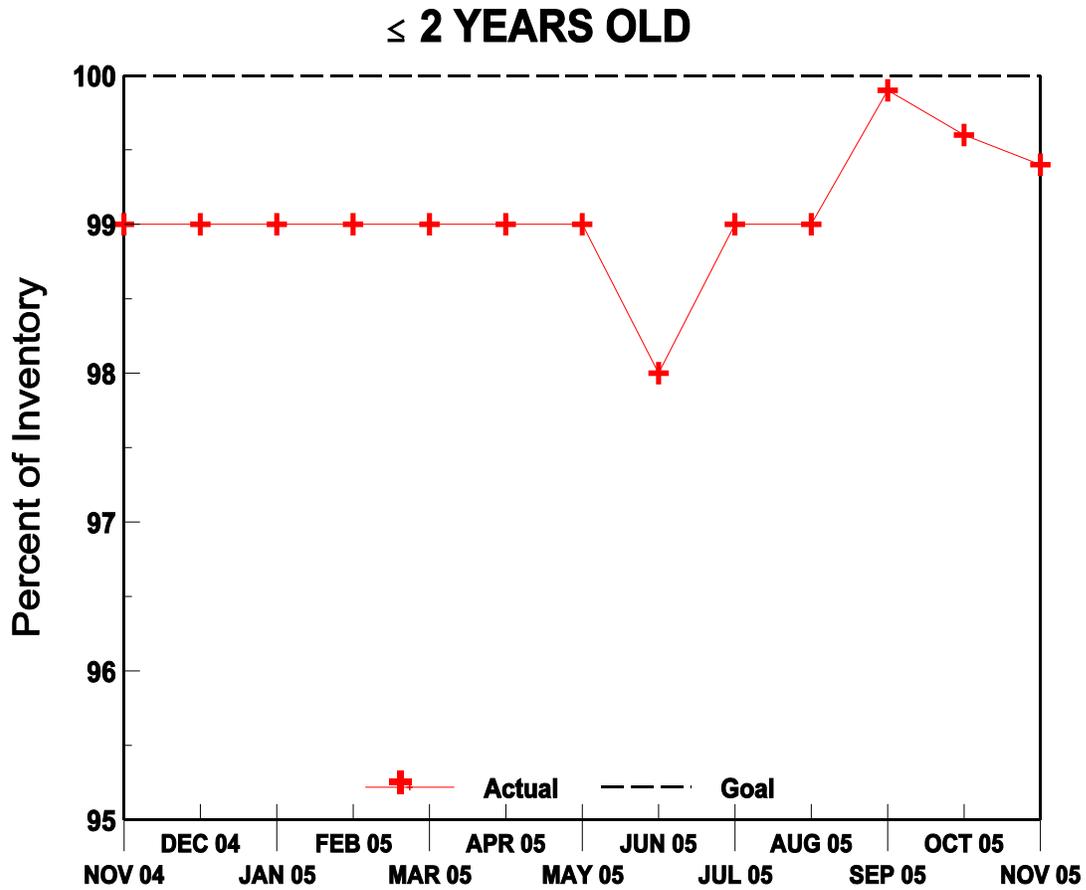
# Nuclear Reactor Safety - Reactor Licensing

Performance Plan Target: Age of Licensing Action Inventory



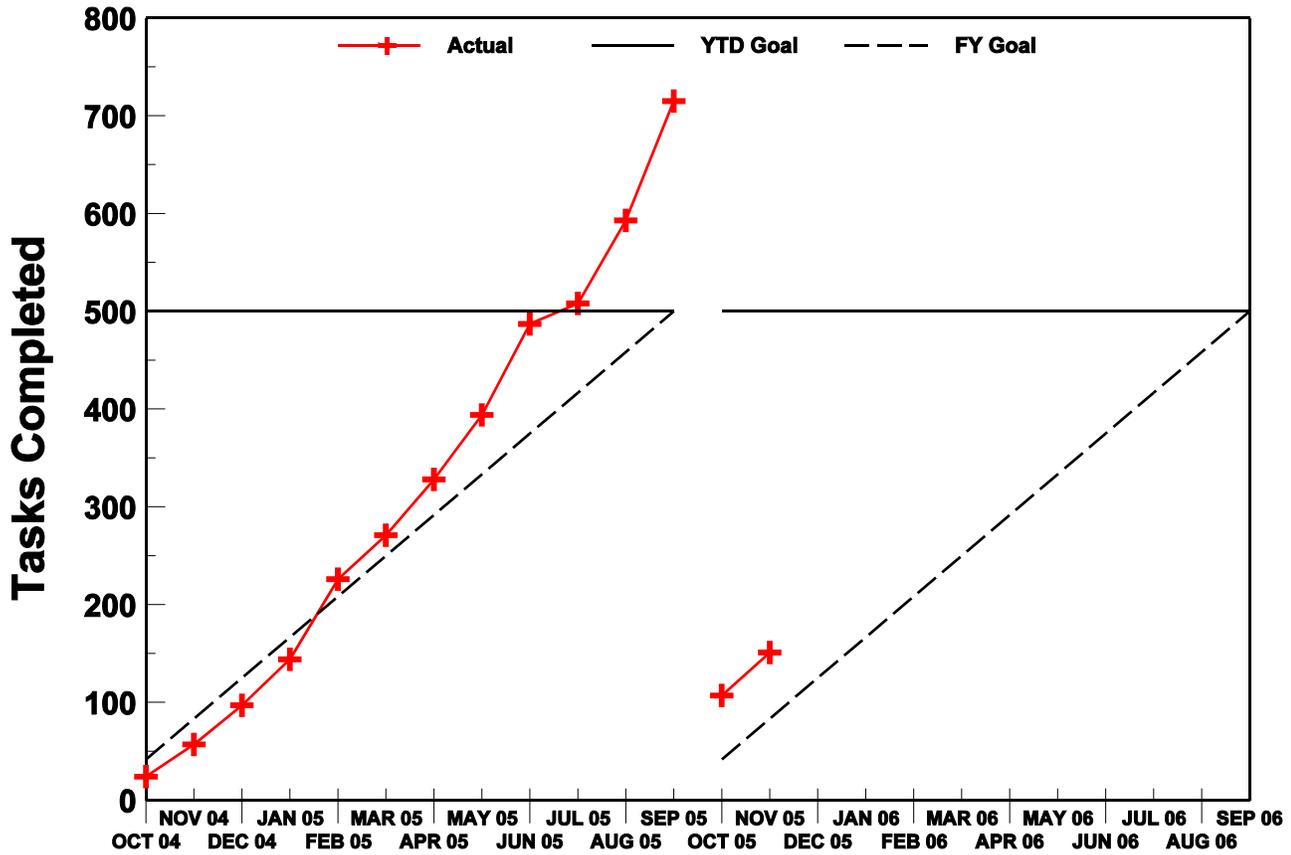
# Nuclear Reactor Safety - Reactor Licensing

Performance Plan Target: Age of Licensing Action Inventory



# Nuclear Reactor Safety - Reactor Licensing

Performance Plan Target: Completed Other Licensing Tasks



## **V Status of License Renewal Activities**

### Browns Ferry, Units 1, 2, and 3, License Renewal Application

The staff issued the final supplemental environmental impact statement (SEIS) in June 2005 and the draft safety evaluation report (SER), identifying remaining open items, in August 2005. The applicant's responses to the open items were received in September 2005. The staff is reviewing the applicant's responses and anticipates issuing the final SER in January 2006.

### Millstone, Units 2 and 3, License Renewal Application

The facility operating licenses for Millstone Units 2 and 3 were renewed on November 28, 2005, for an additional 20 years. The Millstone plant is located in Waterford, Connecticut. The licensee, Dominion Nuclear Connecticut, Inc., submitted the license renewal application for both reactors on January 22, 2004. With the renewal, the licenses for Units 2 and 3 are extended until July 31, 2035, and November 25, 2045, respectively.

### Point Beach, Units 1 and 2, License Renewal Application

The final SEIS was issued in August 2005 and the SER in October 2005. The staff is completing activities to support a decision on renewing the licenses in December 2005.

### Nine Mile Point, Units 1 and 2, License Renewal Application

The application is currently under review. The staff issued the draft SEIS for public comment in September 2005, and the public comment period ends in December 2005. As part of the safety review, the staff is preparing requests for additional information and reviewing responses to requests for additional information previously sent to the licensee. The draft SER, identifying any remaining open items, is scheduled to be issued in March 2006.

### Brunswick, Units 1 and 2, License Renewal Application

The Brunswick license renewal application is currently under review, and the staff is preparing requests for additional information. The draft SEIS was issued in August 2005, and the public comment period ends in December 2005. The draft SER, identifying any remaining open items, is scheduled to be issued in December 2005.

### Monticello License Renewal Application

The Monticello license renewal application is currently under review, and the staff is preparing requests for additional information. The draft SEIS is scheduled to be issued in February 2006, and the draft SER, identifying any remaining open items, is scheduled to be issued in April 2006. A request for hearing has been received in response to the NRC's notice of opportunity for hearing, and an Atomic Safety and Licensing Board (ASLB) has been established.

### Palisades License Renewal Application

The Palisades license renewal application is currently under review, and the staff is preparing requests for additional information. The draft SEIS is scheduled to be issued in February 2006, and the draft SER, identifying any remaining open items, is scheduled to be issued in June 2006. A request for hearing has been received in response to the NRC's notice of opportunity for hearing, and an ASLB has been established.

### Oyster Creek License Renewal Application

The Oyster Creek license renewal application is currently under review and the staff is preparing requests for additional information. The draft SEIS is scheduled to be issued in June 2006, and the draft SER, identifying any remaining open items, is scheduled to be issued in October 2006. A request for hearing has been received in response to the NRC's notice of opportunity for hearing.

## **VI Status of Review of Private Fuel Storage, Limited Liability Corporation's Application for a License to Operate an Independent Spent Fuel Storage Installation on the Reservation of the Skull Valley Band of Goshute Indians**

This proceeding involves the application of Private Fuel Storage, L.L.C. (PFS) to construct and operate an independent spent fuel storage installation on the reservation of the Skull Valley Band of Goshute Indians in Skull Valley, Utah. On September 9, 2005, the Commission issued a Memorandum and Order, CLI-05-19, in which it (a) denied the State of Utah's petition for review of the ASLB's February 24, 2005 Final Partial Initial Decision (Final PID) and other decisions on aircraft crash issues, and (b) authorized the NRC staff, upon making the requisite findings on all non-contested issues, to issue a license to PFS to construct and operate its proposed facility.

On November 3, 2005, the State of Utah filed a motion with the Commission to reopen the record and to amend late-filed Contention Utah UU, based upon recent statements by officials within the U.S. Department of Energy (DOE) concerning DOE's current intention to accept spent fuel in multipurpose canisters at the proposed Yucca Mountain repository. PFS and the NRC Staff have filed responses in opposition to the State's motion.

Petitions for review of the NRC's September 9, 2005 decision and certain other decisions in the PFS proceeding have been filed before the U.S. Court of Appeals for the District of Columbia Circuit by the State of Utah and another Intervenor in the NRC's adjudicatory proceeding. Briefs have not yet been filed by the parties.

The NRC, the Bureau of Land Management (BLM), the Bureau of Indian Affairs, and the Surface Transportation Board, have worked together to fulfill each agency's National Historic Preservation Act Section 106 obligations, leading to the development of a Memorandum of Agreement (MOA) for the protection of historic and cultural resources, and draft treatment and discovery plans to ensure the mitigation of any adverse impact to such resources. All necessary parties have signed the MOA, with the exception of BLM and the Utah State Historic Preservation Officer (SHPO), who have declined to sign the MOA at this or any time in the

foreseeable future. Accordingly, the NRC, by letter dated November 22, 2005, notified the Advisory Council on Historic Preservation (ACHP) that NRC is terminating the Section 106 consultation process, pursuant to 36 C.F.R. § 800.7, and will continue with the licensing process in keeping with these regulations.

## VII Enforcement Process and Summary of Reactor Enforcement by Region

Reactor Enforcement Actions*						
		Region I	Region II	Region III	Region IV	TOTAL
Severity Level I	November 05	0	0	0	0	0
	FY 06 YTD Total	0	0	0	0	0
	FY 05 Total	0	0	2	0	2
	FY 04 Total	0	0	0	0	0
Severity Level II	November 05	0	0	0	0	0
	FY 06 YTD Total	0	0	0	0	0
	FY 05 Total	0	0	2	0	2
	FY 04 Total	0	1	0	0	1
Severity Level III	November 05	0	0	0	0	0
	FY 06 YTD Total	0	0	1	0	1
	FY 05 Total	2	1	3	2	8
	FY 04 Total	1	2	4	0	7
Cited Severity Level IV or GREEN	November 05	0	0	0	0	0
	FY 06 YTD Total	0	0	0	0	0
	FY 05 Total	6	0	4	0	10
	FY 04 Total	1	0	2	3	6
Non-Cited Severity Level IV or GREEN	November 05	22	2	38	46	108
	FY 06 YTD Total	37	32	76	52	197
	FY 05 Total	239	197	300	282	1018
	FY 04 Total	271	175	290	301	1037

\* Numbers of violations are based on enforcement action tracking system data that may be subject to minor changes following verification. The numbers shown as Severity Level I, II, III or IV refer to the number of Severity Level I, II, III, and IV violations or problems. The monthly totals generally lag by 30 days due to inspection report and enforcement development.

<b>Escalated Reactor Enforcement Actions Associated with the Reactor Oversight Process</b>						
		Region I	Region II	Region III	Region IV	TOTAL
Notices of Violation Related to RED, YELLOW, or WHITE Findings	November 05 RED	0	0	0	0	0
	November 05 YELLOW	0	0	0	0	0
	November 05 WHITE	0	0	0	0	0
	FY 06 YTD Total	0	0	0	0	0
	FY 05 Total	5	4	5	1	15
	FY 04 Total	3	4	7	6	20

### **Description of Significant Actions Taken During November 2005**

Exelon Generation Company, LLC (LaSalle County Station) EA-04-170 – On May 2, 2005, a Notice of Violation and Proposed Imposition of a Civil Penalty (NOV/CP) in the amount of \$60,000 was issued to Exelon for a willful Severity Level III violation involving four contract employees who violated radiation protection procedures associated with entry into high radiation areas. On May 12, 2005, Exelon informed the NRC of its intent to appeal this enforcement action using the alternative dispute resolution (ADR) process. In order to resolve disagreements, Exelon, The Venture (a contractor), and NRC representatives met with an independent mediator on July 11, 2005. As part of the ADR settlement agreement, Exelon agreed that a willful violation occurred as documented in the NRC’s May 2, 2005 NOV/CP and committed to implement numerous comprehensive short-term and long-term corrective actions. Based on the expectation that Exelon will satisfactorily implement these corrective actions, the NRC agreed to reclassify the violation as Severity Level IV, reduce the civil penalty to \$10,000, and not consider the violation as part of the civil penalty assessment process (NRC Enforcement Policy, Section VI.C.2) should the NRC consider future enforcement actions against LaSalle. Exelon acknowledged concurrence with the terms and conditions of the settlement agreement in an August 25, 2005 letter, and Exelon signed a “Consent and Hearing Waiver Form” on November 18, 2005. Therefore, a Confirmatory Order confirming commitments reached as part of an ADR mediation settlement agreement was issued to Exelon on November 22, 2005.

### **VIII Power Reactor Security Regulations**

In response to the terrorist attacks on September 11, 2001, the NRC and the nuclear industry have taken many actions to ensure the security at nuclear power plants. A series of Advisories, Orders, and Regulatory Issue Summaries have been and, as needed, continue to be issued to strengthen further the security of NRC-licensed facilities and control of nuclear materials.

In March 2003, the NRC initiated a pilot program for full force-on-force exercises, which used expanded adversary characteristics that were developed as a result of the increased post 9/11 threat. The pilot was completed, and NRC is now implementing exercises at each site on a three-year cycle. The purpose of the force-on-force exercises is to assess and improve, as necessary, performance of defensive strategies at licensed facilities. The NRC retains responsibility for oversight of the mock adversary force and evaluation of licensee performance. Measures have been established to minimize any possibility for a conflict of interest with respect to responsibilities for physical protection. To date, mock adversary force personnel have performed adequately in the force-on-force exercises in which they have participated.

The NRC continues to support the U.S. Department of Homeland Security (DHS) / Homeland Security Council (HSC) initiative to enhance integrated response planning for power reactor facilities. The staff is continuing to work with HSC, DHS, the Federal Bureau of Investigation, and others to develop plans to address recommended actions. Working closely with licensees and DHS, the staff also developed Emergency Action Levels specifically for events involving credible imminent threats.

The NRC has completed the site-specific spent fuel pool assessments begun July 5, 2005. The NRC conducted these assessments to identify additional mitigation strategies to enhance the spent fuel pool cooling safety function under severe circumstances challenging the functional capabilities of the plant. Reports of the site-specific assessments are being prepared. In addition, the NRC is continuing the structural analyses of two spent fuel pools to provide added assurance of spent fuel pool structural safety margin. These analyses will be completed by January 2006.

On August 26, 2005, the NRC published a Proposed Rule on fitness-for-duty (10 CFR Part 26), including both drug/alcohol testing and fatigue-related provisions, for public comment (70 FR 50442). The comment period ends on December 27, 2005. The principal reason for the rulemaking is to update the rule and enhance consistency with advances in other relevant Federal rules and guidelines. The proposed rulemaking would update the drug and alcohol testing provisions and establish enforceable requirements of the management of worker fatigue. On September 21, 2005, the NRC conducted a public workshop on the Proposed Rule. On November 7 and 9, NRC conducted public meetings in Morris, Illinois, and Charlotte, North Carolina, to receive public comments on the proposed Part 26 rulemaking. Comments from the public will be addressed during development of the Final Rule.

On November 7, 2005, the NRC published a Proposed Rule on the Design Basis Threat (DBT) (10 CFR 73.1). The rule was published for public comment with the comment period ending on January 23, 2006. This rulemaking specifies the adversary characteristics that nuclear power plants and certain related facilities must be able to defend against with high assurance. The proposed rule would amend the NRC's regulations to, among other things, include the supplemental security requirements previously imposed by the Commission's April 29, 2003 DBT Orders.

## **IX Power Uprates**

There are three types of power uprates. A measurement uncertainty recapture (MUR) power uprate is a power uprate of less than 2 percent and is based on the use of more accurate feedwater flow measurement techniques. Stretch power uprates (SPUs) are power uprates that are typically on the order of less than 7 percent and are within the design capacity of the plant. SPUs require only minor plant modification. Extended power uprates (EPUs) are power uprates beyond the design capacity of the plant and, thus, require major plant modification.

Licensees have been applying for and implementing power uprates since the 1970s as a way to increase the power output of their plants. The NRC staff has been conducting power uprate reviews since then, and to date, has completed 107 such reviews. Approximately 13,478 megawatts-thermal (MWt) or 4,492 megawatts-electric (MWe) to the Nation's electric generating capacity or an equivalent of about four nuclear power plant units has been gained through implementation of power uprates at existing plants. The NRC staff currently has 12 plant-specific power uprate applications under review. The 12 applications under review include four MUR power uprates, no SPUs, and eight EPUs.

The Vermont Yankee (VY) EPU was submitted on September 10, 2003. The NRC did not complete this review by the end of FY 2005 and, therefore, did not meet the goal of completing 100 percent of its reactor licensing actions within 2 years. The scheduled review of the VY EPU was extended to allow a thorough review of key technical issues associated with safe operation at higher power levels. On October 21, 2005, the NRC staff provided its draft SER of the VY EPU application to the NRC Advisory Committee on Reactor Safeguards (ACRS) and to the licensee in support of ACRS subcommittee meetings on the VY EPU that took place in November 2005. The NRC requested the licensee to review the draft SER for Proprietary Information so that a redacted version can be provided to the public. A redacted, draft, public SER was issued on November 2, 2005. After the NRC staff issues a final SER, currently scheduled for February 24, 2006, the ASLB will hold a hearing to address litigation issues.

Regarding the Calvert Cliffs 1 & 2 and Fort Calhoun MUR power uprates, which were submitted on January 31 and March 31, 2005, respectively, the NRC did not complete the reviews within six months, which is the timeliness goal for MUR power uprates that are based on the use of NRC-approved methodologies for feedwater flow measurement. The scheduled reviews have been extended because the licensees chose not to use NRC-approved methodologies.

In June 2005, the NRC staff surveyed all licensees to obtain information on whether they planned to submit power uprate applications over the next 5 years. Based on this survey and information obtained since the survey, licensees plan to request power uprates for 18 nuclear power plant units over the next 5 years. If approved, these power uprates will result in an increase of about 3,832 MWt or approximately 1,277 MWe.

## **X      New Reactor Licensing**

The NRC expects to license the next generation of nuclear power plants using Part 52 to Title 10 of the *Code of Federal Regulations*, (10 CFR Part 52). 10 CFR Part 52 governs the issuance of standard design certifications, early site permits (ESPs), and combined licenses for nuclear power plants.

### Design Certifications and Pre-Application Meetings

On August 24, 2005, General Electric (GE) submitted its design certification application for the Economic Simplified Boiling Water Reactor (ESBWR) design. By letter dated September 23, 2005, the NRC staff informed GE that the acceptance review for the ESBWR design certification application was complete, that the staff concluded that portions of the application are not sufficiently complete for the staff to begin its review of those areas, and that the application will not be formally accepted for docketing until additional information is provided. On October 24, 2005, GE responded to the deficiencies identified by the NRC staff. The staff continues to perform an acceptance review of the additional information submitted by GE. On November 17, 2005, NRC staff completed an inspection at the GE Nuclear Energy facility in Wilmington, North Carolina. This inspection supports the quality assurance review for design certification of the ESBWR. The NRC staff is evaluating the results of the inspection related to the implementation of the GE quality assurance program.

On November 2, 2005, the NRC staff met with representatives of Framatome to discuss the EPR pre-application review. Framatome outlined the safety analysis methods it plans to use to support the EPR design certification. In most cases, Framatome plans to demonstrate the applicability of codes and methods already approved by the NRC to the EPR design and use these codes and methods to perform safety analyses. Framatome also described the EPR's severe accident features and its proposed approach for analyzing severe accidents.

Pebble-bed modular reactor (PBMR) (Pty) Ltd. continues to engage the NRC staff in planning discussions to prepare for the PBMR design. PBMR (Pty) Ltd. intends to pursue a design certification under 10 CFR Part 52. The company has also stated that it intends eventually to seek deployment of the PBMR in the U.S. PBMR (Pty) Ltd. expects to submit detailed white papers on a number of technical topics and support the submittals with educational sessions and topical workshops for the NRC staff. PBMR (Pty) Ltd.'s most recent schedule projections show the pre-application phase to extend to the end of 2007 or early 2008, followed by a design certification application in 2008. The NRC staff is scheduled to meet with PBMR (Pty) Ltd. on December 12, 2005, to discuss the detailed scope and schedules for topical reports submittals and workshops in support of pre-application.

### Early Site Permits

The staff is currently reviewing three ESP applications. Dominion Nuclear North Anna, LLC (Dominion) submitted an ESP application in September 2003 for its North Anna site located in Louisa County, Virginia. The final SER for the North Anna ESP was issued on June 16, 2005. On October 25, 2005, Dominion notified the staff that it was changing the design of the cooling system for proposed Unit 3 from a once-through cooling system to a closed cooling system. The change was made to address the water usage concerns expressed by the Commonwealth of Virginia and local citizens. The change will require revisions to the application, the

environmental impact statement (EIS), and the final SER. In a letter dated November 2, 2005, the NRC staff informed Dominion that it would make a determination on the potential impacts to the final EIS and the SER schedule upon receipt of Dominion's revised submission. There will be no impacts on the other two ESP applicants as a result of Dominion's actions at this late stage in the review process.

In September 2003, Exelon Generation Company, LLC submitted an ESP application for its Clinton site located in Harp Township, DeWitt County, Illinois. The NRC staff issued the draft SER for the Exelon ESP application for the Clinton site on February 10, 2005. The staff issued the supplemental draft SER with open items on August 26, 2005. The final SER is scheduled to be issued on February 17, 2006.

System Energy Resources Inc. submitted an ESP application in October 2003 for its Grand Gulf site located in Claiborne County, Mississippi. On October 21, 2005, the staff issued the final SER for the Grand Gulf early site permit application.

All three applications require an EIS. The North Anna draft EIS was issued on December 10, 2004, the Clinton draft EIS was issued on March 2, 2005, and the Grand Gulf draft EIS was issued on April 21, 2005. The staff is scheduled to issue the final EIS for the Grand Gulf site in April 2006 and for the Clinton site in July 2006.

#### Combined License

On August 17, 2005, Southern Nuclear Operating Company notified the NRC staff that Georgia Power Company had directed them to pursue an ESP/Combined License (COL) at the Vogtle Electric Generating Plant site located near Waynesboro, Georgia. Southern is scheduled to submit an ESP application in August 2006 and their COL application in March 2008.

AREVA and Constellation Energy announced on September 15, 2005, the formation of UniStar Nuclear. This joint enterprise is intended to provide a single source for design, construction, and operation of new nuclear plants. UniStar Nuclear will market the EPR reactor design. AREVA and Constellation each own half of Unistar. Bechtel also supports the company, providing architect-engineer and construction expertise. The NRC staff met with representatives of Constellation Energy and Framatome on November 2, 2005, to discuss plans for combined license applications. An application for certification of the EPR is planned at the end of 2007, with a combined license application referencing EPR following about 6 months later. An additional COL application is planned about a year later. An announcement of the site for the first application is planned for early 2006. Constellation representatives said that the most likely sites are Nine Mile Point and Calvert Cliffs.

By letter dated August 24, 2005, Progress Energy notified the NRC staff that it expects to identify both a site and a vendor by the end of calendar year 2005, with the potential submittal of an application for a Combined License in the first quarter of calendar year 2008. On November 1, 2005, the NRC staff met with Progress Energy to discuss planning related to combined license applications for sites in Florida and Carolina. Progress Energy stated that it had not yet selected a technology or the specific sites, which could be greenfield or existing sites. Progress Energy plans to use the same technology at both sites and submit applications for two units at each site. Progress Energy will be determining the technology and sites by the end of 2005 and is planning on submitting the applications in late 2007, within a month of each other.

On November 15, 2005, the NRC staff met with Entergy Nuclear to discuss planning related to COL applications for the Grand Gulf and River Bend sites. The Grand Gulf application is scheduled to be submitted in either the fourth quarter of 2007 or the first quarter of 2008, and the River Bend application is scheduled to be submitted approximately 6 weeks after the Grand Gulf submittal. The Grand Gulf application will be a joint venture with NuStart and will be referencing the Grand Gulf early site permit. Both submittals will be referencing the GE ESBWR. Entergy stated that it is working with Dominion Nuclear, which is also referencing the ESBWR design, to submit a standardized COL application and is working with GE on the certification of the ESBWR design.

On September 22, 2005, NuStart Energy announced that it had selected Grand Gulf and Bellefonte as the two sites it will use for its applications for combined licenses for new nuclear plants. The Grand Gulf site was designated for the General Electric ESBWR design and the Bellefonte site for the Westinghouse Advanced Passive 1000 reactor design. In its letter dated November 17, 2005, NuStart announced that it would be preparing a dual unit COL application for the Bellefonte site, which is scheduled to be submitted during the fourth quarter of 2007, and a single unit COL application for the Grand Gulf site, which is scheduled for the fourth quarter of 2007 or the first quarter of 2008.

#### Regulatory Infrastructure

On November 3, 2005, the Executive Director for Operations signed SECY-05-0203, "Revised Proposed Rule to Update 10 CFR Part 52, Licenses, Certifications, and Approvals for Nuclear Power Plants." SECY-05-0203 requests Commission approval to publish in the *Federal Register* proposed revisions to 10 CFR Part 52, as well as changes throughout the NRC's regulations to enhance the NRC's regulatory effectiveness and efficiency in implementing the licensing and approval processes in Part 52 and to clarify the applicability of various requirements to each of the regulatory processes in Part 52. This rulemaking to enhance 10 CFR Part 52 is based on lessons learned during design certification and ESP reviews and on discussions with stakeholders about the ESP, design certification, and combined license review processes. This revised proposed rule would withdraw and supersede the Commission's July 3, 2003 (68 FR 40026) proposed rule on 10 CFR Part 52.

On October 28, 2005, the EDO signed SECY-05-0197, "Review of Operational Programs in a Combined License Application and Generic Emergency Planning Inspections, Tests, Analyses, and Acceptance Criteria." The paper concludes that ITAAC for operational programs, with the exception of emergency planning (EP) ITAAC, are not required if the operational programs and their implementation are fully described with safety analysis report level information in a COL application. The paper identifies operational programs currently known to be required by regulation. The staff would make a reasonable assurance finding on these programs during the review of a COL application and inspect the programs during plant construction. The paper also discusses a process to identify any remaining programs that meet these criteria. The paper proposes license conditions for operational programs that lack implementation

requirements in the regulations as well as to provide periodic updates of implementation schedules for all operational programs addressed by this paper. The paper also provides a set of generic EP ITAAC for the development of the minimum EP ITAAC in a COL application.

The Energy Policy Act of 2005 directs DOE to establish the Next Generation Nuclear Plant (NGNP) Project, which will include the development and demonstration of an advanced prototype nuclear reactor to generate electricity and produce hydrogen. The Act gives licensing authority for the prototype reactor to the NRC. The Act directs DOE to engage NRC during the development process and directs the NRC to develop jointly with DOE a licensing strategy for the reactor to be submitted to Congress in 2008. NRC has initiated discussions with DOE to coordinate our activities in support of the NGNP Project and to begin to implement the requirements of the Act.

The chart on the following page summarizes the new reactor licensing activities as of November 30, 2005:

**New Reactor Licensing Activities  
As of November 30, 2005**

<b>Organization</b>	<b>Designs endorsed or under consideration</b>	<b>Sites under Consideration</b>	<b>Planned Applications</b>	<b>Date</b>	<b>Basis</b>
<b>General Electric</b>	ESBWR		Design Certification	8/25/2005	8/25/05 Application Submitted
<b>Framatome ANP</b>	EPR		Design Certification	12/2007	Letter 11/4/05
<b>Southern Nuclear Operating Company</b>	AP1000/ESBWR	Vogtle	ESP and COL	8/2006: ESP 3/2008: COL	Letters 7/26 and 8/17/05 Mtg Summary (ML052710018)
<b>Constellation</b>	EPR	Nine Mile Point and Calvert Cliffs, plus 2	COL	6/2008 and 6/2009	Press Release 11/2/05 Mtg Letter 11/4/05
<b>Dominion</b>	ESBWR	North Anna	COL	9/2007	DOE solicitation award and press release Letter 11/22/05
<b>Duke</b>	AP1000 (2)	TBD	COL	Late 2007 or Early 2008	Letters 3/4/05 and 10/25/05
<b>Progress Energy</b>	AP1000, ESBWR, or EPR	Carolina (2) Florida (2)	COL	Late 2007	Letter 8/24/05 11/1/05 Mtg
<b>NuStart Energy</b>	AP1000  ESBWR	Bellefonte (2)  Grand Gulf	COL COL	4 <sup>th</sup> Qtr 2007  4 <sup>th</sup> Qtr 2007 or 1 <sup>st</sup> Qtr 2008	Letters 12/7/2004 and 11/17/2005, press release
<b>Entergy</b>	ESBWR	River Bend	COL	Early 2008	Press release 11/15/05 Mtg
<b>Unannounced Potential Applicant</b>	AP1000, ESBWR, or EPR	TBD	COL	Mid 2007	Prop Letter